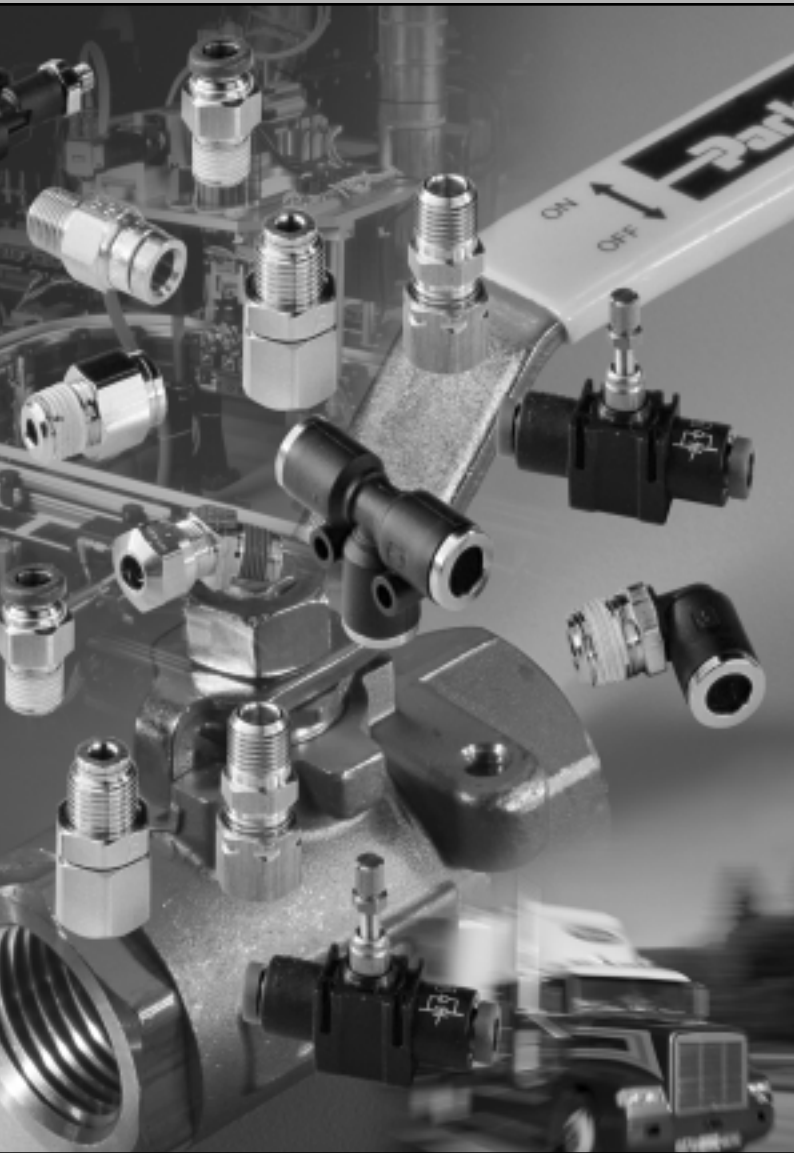




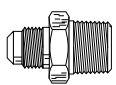

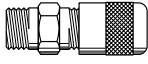

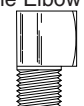
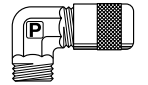
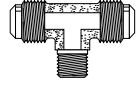

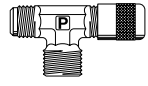
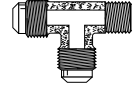
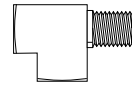
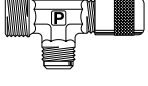
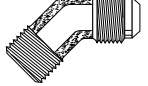
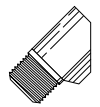
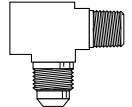
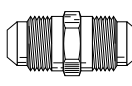

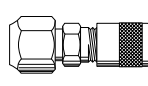
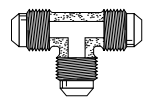
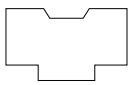
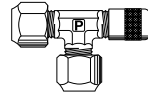
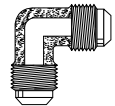
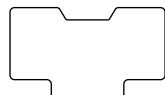

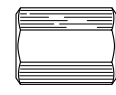
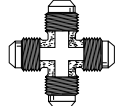
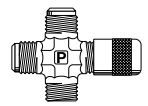
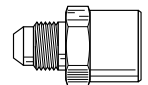

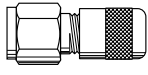
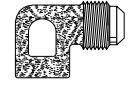
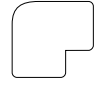
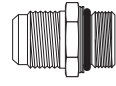
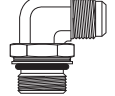
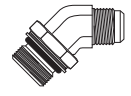
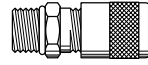
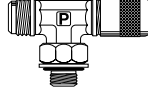
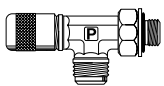
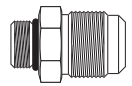
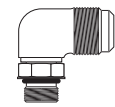
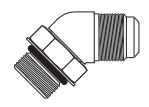
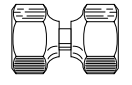
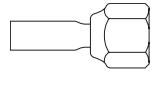
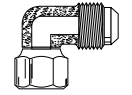
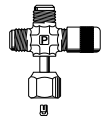
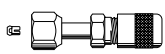
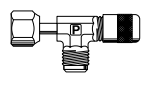
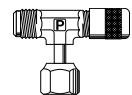
Flare Fittings


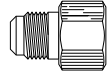

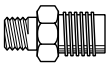
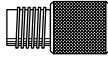
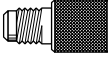


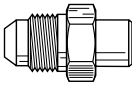
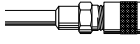
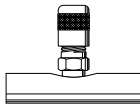
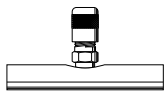
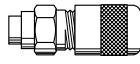

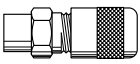















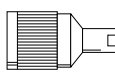



SAE 45° Flared Fittings	D4
Inverted Flare Fittings	D14
Access Valves	D18

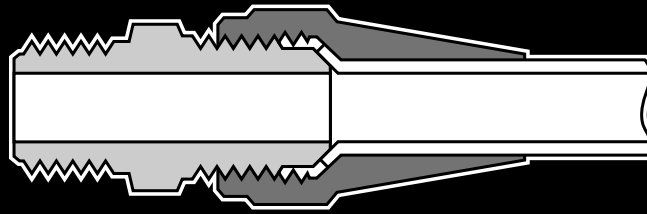
The World Standard

D

<p>Flare to Male NPT</p>	<p>48F Male Connector  Page D8</p>	<p>481FHD Male Connector  Page D16</p>	<p>AVU1 Male Connector  Page D20</p>	<p>149F/249F Male Elbow  Page D10</p>	<p>2491FHD / 2491F Male Elbow  Page D16</p>	<p>AVE1 Male Elbow  Page D20</p>
<p>145F Branch Tee  Page D9</p>	<p>2451FHD Branch Tee  Page D16</p>	<p>AVT1 Branch Tee  Page D20</p>	<p>151F Run Tee  Page D11</p>	<p>2511FHD Run Tee  Page D17</p>	<p>AVT3 Run Tee  Page D20</p>	<p>159F/259F 45° Male Elbow  Page D12</p>
<p>2591FHD 45° Male Elbow  Page D17</p>	<p>256F Adapter Tee  Page D12</p>	<p>Flare to Flare</p>	<p>42F Union  Page D7</p>	<p>421FHD Union  Page D15</p>	<p>AVU2 Union  Page D19</p>	<p>144F Union Tee  Page D9</p>
<p>2441FHD Union Tee  Page D16</p>	<p>AVT2 Union Tee  Page D20</p>	<p>155F Union Elbow  Page D11</p>	<p>2521FHD Branch Tee  Page D17</p>	<p>2551FHD Union Elbow  Page D17</p>	<p>660FHD Flare Union  Page D13</p>	<p>147F Cross  Page D9</p>
<p>AVC1 Cross  Page D20</p>	<p>Flare to Female NPT</p>	<p>46F Female Connector  Page D8</p>	<p>461FHD Female Connector  Page D15</p>	<p>AVUR3 Female Connector  Page D21</p>	<p>150F Female Elbow  Page D11</p>	<p>2501FHD Female Elbow  Page D17</p>
<p>Flare to Metric Straight Thread</p>	<p>48F-MI Male Connector  Page D8</p>	<p>149F-MI Male Elbow  Page D10</p>	<p>159F-MI 45° Male Elbow  Page D12</p>	<p>Flare to Straight Thread</p>	<p>AVU1F1 Male Connector  Page D20</p>	<p>AVT1F1 Branch Tee  Page D22</p>
<p>AVT3F1 Run Tee  Page D23</p>	<p>485F Male Connector  Page D9</p>	<p>1495F Male Elbow  Page D10</p>	<p>1595F 45° Elbow  Page D12</p>	<p>Swivels</p>	<p>14FSV Swivel Nut Connector  Page D6</p>	<p>US5 Flare Adapter  Page D6</p>
<p>166FSV Swivel Elbow  Page D12</p>	<p>AVCS4D Cross  Page D21</p>	<p>AVUS4D Swivel Connector  Page D21</p>	<p>AVTS4 Swivel Run Tee  Page D21</p>	<p>AVTS6 Swivel Branch Tee  Page D22</p>		

<p>Adapters</p>	<p>1F Refrigerant Drum</p>  <p>Page D5</p>	<p>661FHD Reducer</p>  <p>Page D13</p>	<p>664FHD Female Flare to Pipe</p>  <p>Page D13</p>	<p>88AC Refrigerant Adapter</p>  <p>Page D23</p>	<p>880AC Refrigerant Adapter</p>  <p>Page D23</p>	<p>881AC Refrigerant Adapter</p>  <p>Page D23</p>
<p>Bulkheads</p>	<p>AVU2BH Bulkhead Union</p>  <p>Page D19</p>	<p>AVUS3BH Solder Union</p>  <p>Page D19</p>	<p>Flare to Solder</p>	<p>43F Connector</p>  <p>Page D7</p>	<p>AVUSE Extended Copper Tube</p>  <p>Page D19</p>	<p>AVTS Solder Tee</p>  <p>Page D19</p>
<p>AVTSL Extended Solder Tee</p>  <p>Page D19</p>	<p>AVUS3-40 3 Way Solder</p>  <p>Page D21</p>	<p>AVUS3-49 9 Way Solder</p>  <p>Page D21</p>	<p>AVUS Solder Connector</p>  <p>Page D21</p>			
<p>Auxiliary</p>	<p>14FL Long Forged Nut</p>  <p>Page D5</p>	<p>14FSX Short Forged Nut</p>  <p>Page D5</p>	<p>14FS Forged Reducing Nut</p>  <p>Page D6</p>	<p>41FL Long Nut</p>  <p>Page D6</p>	<p>41FS/41FX Short Nut</p>  <p>Page D6</p>	<p>411F Inverted Flare Nut</p>  <p>Page D15</p>
<p>411FS Inverted Flare Nut Steel</p>  <p>Page D15</p>	<p>411FF Inverted Flare Piloted Nut</p>  <p>Page D15</p>	<p>639F Seal Plug</p>  <p>Page D13</p>	<p>640F Cap Nut</p>  <p>Page D13</p>	<p>640QSF Seal Cap</p>  <p>Page D22</p>	<p>640QSFC Seal Cap w/Chain</p>  <p>Page D22</p>	<p>640QSFCR Cap w/ Core Remover</p>  <p>Page D22</p>
<p>2GF Flare Gasket</p>  <p>Page D5</p>	<p>3GF Seal Bonnet</p>  <p>Page D5</p>	<p>CR Core Remover</p>  <p>Page D22</p>	<p>VC Valve Core</p>  <p>Page D22</p>			

D



SAE 45° Flared Fittings

Advantages

This economical fitting resists mechanical pullout. Can be assembled and disassembled repeatedly. Manufactured from CA 360, CA 345 or CA 377 brass.

Specifications

Listed with Underwriter's Laboratories for flammable liquid, marine, refrigeration and gas applications. Meets functional requirements of SAE J512 and J513, ASA and MS (Military Standards). Refer to list of UL listed fittings on page M10 for specific configurations.

Applications

Use with copper, brass, aluminum and welded steel hydraulic tubing that can be flared. Manufactured especially for hard-to-hold liquids and gases.

Working Pressure Ranges

Temperature and type of tubing used are important factors. However, the following table is a good guide for proper selection. Temperature 73°F with copper tubing:

PSI	TUBE O.D. (IN.)	TUBE WALL (IN.)
2800	1/8	.030
1900	3/16	.030
1400	1/4	.030
1200	5/16	.032
1000	3/8	.032
750	1/2	.032
650	5/8	.035
550	3/4	.035
450	7/8	.035

Temperature Ranges

From -65° to +250°F.

Vibration

Short nut may be used when vibration is minimal. The long nut offers additional vibration capacity.

Assembly Instructions

1. Cut tubing squarely and clean tube end thoroughly to remove burrs.
2. Place nut onto tube. Place threaded end of nut toward end of tube.
3. Flare tube end with flaring tool to provide 45° flare.
4. Clamp tube flare between nut and nose of fitting body by screwing nut on finger-tight. Tighten with a wrench an additional 1/4 turn for a metal-to-metal seal.

Flare fittings are easy to disassemble and may be reassembled repeatedly, for a leak-proof connection.

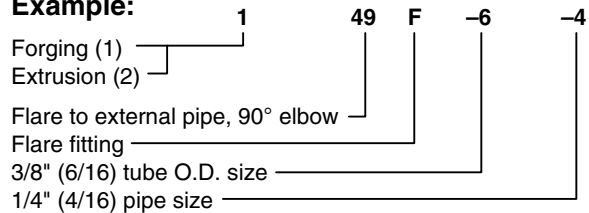
Order

By part number and name. SAE 45° flared bodies and nuts are separate items. Both numbers must be indicated when ordered.

Nomenclature

Part numbers are constructed from symbols that identify the style and size of the fitting. The first series of numbers and letters identifies the style and type fitting. The second series of numbers describes the size.

Example:



Sizes

Tube sizes are determined by the numbers of sixteenths of an inch in the tube O.D.

Special Fittings

Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry. Special UL stamped fittings are available. Please consult price list.

Pricing

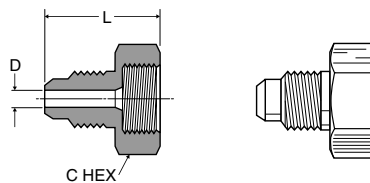
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Refrigerant Drum a Aapter 1F

Ref. SAE 010165

PART NO.	TUBE O.D.	PIPE THREAD	C HEX	L	FLOW DIA. D
1F-4-8	1/4	1/2	1-1/8	1.12	.187
1F-4-12	1/4	3/4	1-1/4	1.12	.187
1F-6-12	3/8	3/4	1-1/4	1.24	.282
1F-8-12	1/2	3/4	1-1/4	1.37	.407

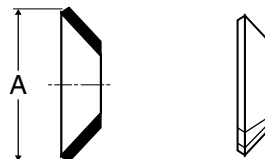
Gasket Furnished with each 1F adapter



Copper Flare Gasket 2GF

Ref. SAE 010113

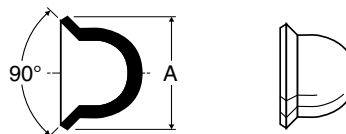
PART NO.	TUBE SIZE	A
2GF-3	3/16	.32
2GF-4	1/4	.37
2GF-5	5/16	.43
2GF-6	3/8	.56
2GF-8	1/2	.67
2GF-10	5/8	.78
2GF-12	3/4	.97



Seal Bonnet 3GF

Ref. SAE 010114

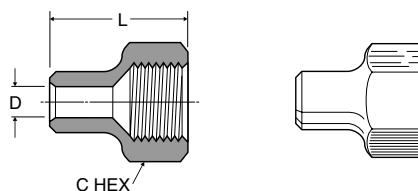
PART NO.	TUBE SIZE	A
3GF-3	3/16	.32
3GF-4	1/4	.37
3GF-5	5/16	.43
3GF-6	3/8	.56
3GF-8	1/2	.67
3GF-10	5/8	.78
3GF-12	3/4	.97



Long Forged Nut 14FL

Ref. SAE 010167

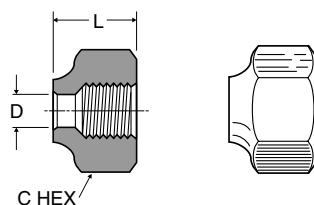
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
14FL-4	1/4	7/16-20	5/8	.257	.94
14FL-6	3/8	5/8-18	13/16	.382	1.06
14FL-8	1/2	3/4-16	15/16	.507	1.19
14FL-10	5/8	7/8-14	1-1/16	.632	1.44



Short Forged Nut 14FSX

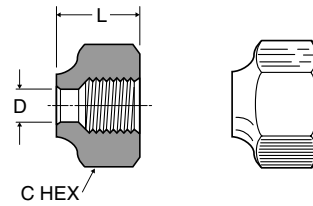
Ref. SAE 010166

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
14FSX-4	1/4	7/16-20	5/8	.257	.63
14FSX-5	5/16	1/2-20	11/16	.320	.67
14FSX-6	3/8	5/8-18	13/16	.382	.74
14FSX-8	1/2	3/4-16	15/16	.508	.86
14FSX-10	5/8	7/8-14	1-1/16	.632	.97
14FSX-12	3/4	1-1/16-14	1-5/16	.758	1.17



Short Forged Reducing Nuts 14FS

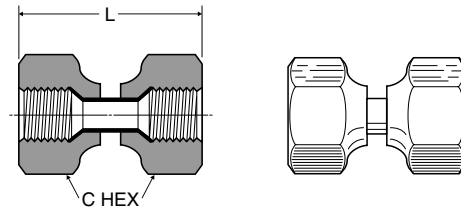
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
14FS-6-4	3/8 to 1/4	5/8-18	13/16	.257	.74
14FS-8-6	1/2 to 3/8	3/4-16	15/16	.382	.86
14FS-10-8	5/8 to 1/2	7/8-14	1-1/16	.507	.99



Swivel Nut Valve Connector 14FSV

Ref. SAE 010108

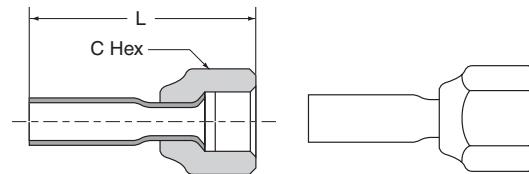
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
14FSV-4	1/4	7/16-20	5/8	1.31
14FSV-6	3/8	5/8-18	13/16	1.50
14FSV-8	1/2	3/4-16	15/16	1.75
14FSV-10	5/8	7/8-14	1-1/16	2.00



D

Flare Adapter US5

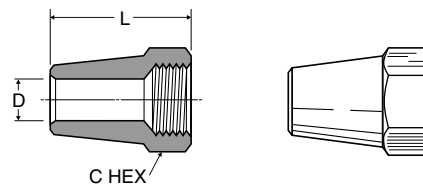
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
US5-4	1/4	7/16-20	5/8	1.50
US5-6	3/8	5/8-18	13/16	1.58
US5-8	1/2	3/4-16	15/16	1.80
US5-10	5/8	7/8-14	1-1/16	2.18



Long Nut 41FL

Ref. SAE 010111

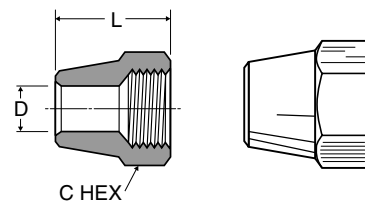
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
41FL-2	1/8	5/16-24	3/8	.133	.75
41FL-3	3/16	3/8-24	7/16	.195	.81
41FL-4	1/4	7/16-20	9/16	.257	.94
41FL-5	5/16	1/2-20	5/8	.320	1.12
41FL-6	3/8	5/8-18	3/4	.382	1.31
41FL-8	1/2	3/4-16	7/8	.507	1.62
41FL-10	5/8	7/8-14	1-1/16	.632	1.88
41FL-12	3/4	1-1/16-14	1-1/4	.758	2.19



Short Nut 41FS / Shorter Nut 41FX

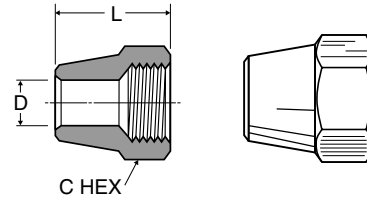
Ref. SAE 010110

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
41FS-2	1/8	5/16-24	3/8	.132	.50
41FS-3	3/16	3/8-24	7/16	.195	.62
41FS-4	1/4	7/16-20	9/16	.257	.75
41FS-5	5/16	1/2-20	5/8	.320	.88
41FS-6	3/8	5/8-18	3/4	.382	1.00
41FX-6	3/8	5/8-18	3/4	.382	.91
41FS-7	7/16	11/16-16	13/16	.445	1.06
41FS-8	1/2	3/4-16	7/8	.507	1.12
41FX-8	1/2	3/4-16	7/8	.507	1.00
41FS-10	5/8	7/8-14	1-1/16	.632	1.31
41FX-10	5/8	7/8-14	1-1/16	.632	1.06
41FS-12	3/4	1-1/16-14	1-1/4	.757	1.50
41FS-14	7/8	1-1/4-12	1-1/2	.882	1.62



Reducing Nuts 41FS

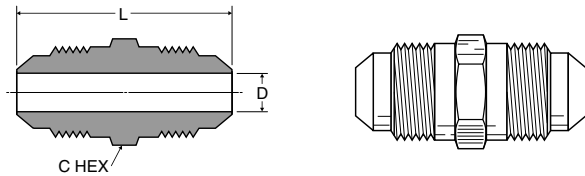
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
41FS-6-4	3/8 to 1/4	5/8-18	3/4	.257	1.00
41FS-8-6	1/2 to 3/8	3/4-16	7/8	.382	1.09
41FS-10-8	5/8 to 1/2	7/8-14	1-1/16	.507	1.25



Union 42F

Ref. SAE 010101 *Thread Protectors

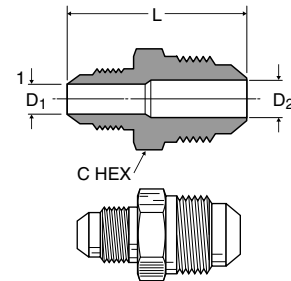
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
42F-2	1/8	5/16-24	5/16	.90	.079
42F-3	3/16	3/8-24	3/8	1.04	.125
42F-4	1/4	7/16-20	7/16	1.17	.188
42F-5	5/16	1/2-20	1/2	1.32	.219
42F-6	3/8	5/8-18	5/8	1.48	.281
42F-8	1/2	3/4-16	3/4	1.79	.408
42F-10	5/8	7/8-14	7/8	2.10	.502
42F-12*	3/4	1-1/16-14	1-1/16	2.42	.626
42F-14*	7/8	1-1/4-12	1-1/4	2.72	.752



Union Reducers 42F

Ref. SAE 010101

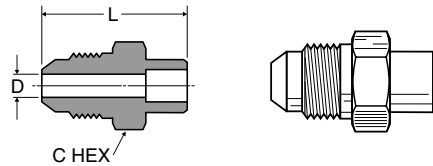
PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	FLOW DIA. D1	FLOW DIA. D2
42F-6-4	1/4	3/8	7/16-20	5/8-18	5/8	1.36	.188	.281
42F-6-5	5/16	3/8	1/2-20	5/8-18	5/8	1.42	.219	.281
42F-8-4	1/4	1/2	7/16-20	3/4-16	3/4	1.54	.188	.408
42F-8-6	3/8	1/2	5/8-18	3/4-16	3/4	1.67	.281	.408
42F-10-6	3/8	5/8	5/8-18	7/8-14	7/8	1.86	.281	.502
42F-10-8	1/2	5/8	3/4-16	7/8-14	7/8	1.98	.408	.502



Flare to Solder 43F

Ref. SAE 010104

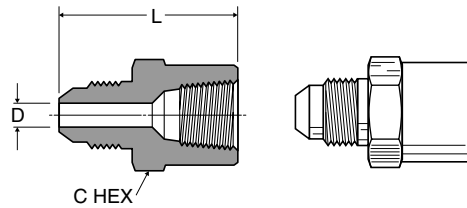
PART NO.	TUBE SIZE	SOLDER OD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
43F-4-4	1/4	1/4	7/16-20	7/16	.98	.189
43F-4-5	1/4	5/16	7/16-20	7/16	.98	.189
43F-4-6	1/4	3/8	7/16-20	1/2	.98	.189
43F-6-4	3/8	1/4	5/8-18	5/8	1.17	.189
43F-6-5	3/8	5/16	5/8-18	5/8	1.17	.252
43F-6-6	3/8	3/8	5/8-18	5/8	1.17	.283
43F-6-8	3/8	1/2	5/8-18	5/8	1.23	.283
43F-6-10	3/8	5/8	5/8-18	3/4	1.36	.283
43F-8-6	1/2	3/8	3/4-16	3/4	1.36	.314
43F-8-8	1/2	1/2	3/4-16	3/4	1.42	.408
43F-8-10	1/2	5/8	3/4-16	3/4	1.54	.408
43F-10-8	5/8	1/2	7/8-14	7/8	1.60	.440
43F-10-10	5/8	5/8	7/8-14	7/8	1.73	.502
43F-10-12	5/8	3/4	7/8-14	7/8	1.86	.502
43F-10-14	5/8	7/8	7/8-14	1	1.98	.502
43F-12-12	3/4	3/4	1-1/16-14	1-1/16	2.04	.627
43F-12-14	3/4	7/8	1-1/16-14	1-1/16	2.17	.627



Female Connector 46F

Ref. SAE 010103

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
46F-2-2	1/8	1/8	5/16-24	9/16	.91	.078
46F-3-2	3/16	1/8	3/8-24	9/16	.95	.125
46F-4-2	1/4	1/8	7/16-20	9/16	1.01	.188
46F-4-4	1/4	1/4	7/16-20	11/16	1.23	.188
46F-4-6	1/4	3/8	7/16-20	13/16	1.26	.188
46F-5-2	5/16	1/8	1/2-20	9/16	1.05	.220
46F-5-4	5/16	1/4	1/2-20	11/16	1.26	.220
46F-6-2	3/8	1/8	5/8-18	5/8	1.10	.282
46F-6-4	3/8	1/4	5/8-18	11/16	1.29	.282
46F-6-6	3/8	3/8	5/8-18	13/16	1.36	.282
46F-6-8	3/8	1/2	5/8-18	1	1.60	.282
46F-8-4	1/2	1/4	3/4-16	3/4	1.39	.408
46F-8-6	1/2	3/8	3/4-16	13/16	1.48	.408
46F-8-8	1/2	1/2	3/4-16	1	1.73	.408
46F-8-12	1/2	3/4	3/4-16	1-1/4	1.79	.408
46F-10-6	5/8	3/8	7/8-14	7/8	1.57	.502
46F-10-8	5/8	1/2	7/8-14	1	1.80	.502
46F-10-12	5/8	3/4	7/8-14	1-1/4	1.89	.502

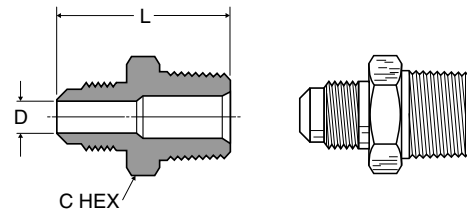


D

Male Connector 48F

Ref. SAE 010102 *Thread Protectors

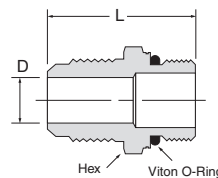
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
48F-2-2	1/8	1/8	5/16-24	7/16	.91	.078
48F-3-2	3/16	1/8	3/8-24	7/16	.98	.125
48F-3-4	3/16	1/4	3/8-24	9/16	1.17	.125
48F-4-2	1/4	1/8	7/16-20	7/16	1.04	.189
48F-4-4	1/4	1/4	7/16-20	9/16	1.23	.189
48F-4-6	1/4	3/8	7/16-20	11/16	1.29	.189
48F-4-8	1/4	1/2	7/16-20	7/8	1.54	.189
48F-5-2	5/16	1/8	1/2-20	1/2	1.14	.220
48F-5-4	5/16	1/4	1/2-20	9/16	1.32	.220
48F-5-6	5/16	3/8	1/2-20	11/16	1.36	.220
48F-6-2	3/8	1/8	5/8-18	5/8	1.23	.220
48F-6-4	3/8	1/4	5/8-18	5/8	1.42	.282
48F-6-6	3/8	3/8	5/8-18	11/16	1.42	.282
48F-6-8	3/8	1/2	5/8-18	7/8	1.67	.282
48F-6-12	3/8	3/4	5/8-18	1-1/16	1.79	.282
48F-8-4	1/2	1/4	3/4-16	3/4	1.60	.408
48F-8-6	1/2	3/8	3/4-16	3/4	1.60	.408
48F-8-8	1/2	1/2	3/4-16	7/8	1.79	.408
48F-8-12	1/2	3/4	3/4-16	1-1/16	1.92	.408
48F-10-4	5/8	1/4	7/8-14	7/8	1.79	.313
48F-10-6	5/8	3/8	7/8-14	7/8	1.79	.408
48F-10-8	5/8	1/2	7/8-14	7/8	1.98	.501
48F-10-12	5/8	3/4	7/8-14	1-1/16	2.04	.501
48F-12-8*	3/4	1/2	1-1/16-14	1-1/16	2.17	.562
48F-12-12*	3/4	3/4	1-1/16-14	1-1/16	2.17	.626
48F-14-12*	7/8	3/4	1-1/4-12	1-1/4	2.35	.752



Flare to Metric Adaptor 48F-X-MIX

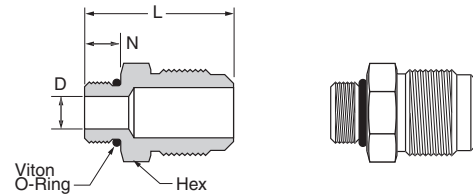
PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	L	D
48F-8-MI16	1/2	M16 X 1.5	7/8	1.60	.35
48F-10-MI27	5/8	M27 x 2.0	1 1/4	1.87	.50
48F-12-MI27	3/4	M27 x 2.0	1 1/4	1.99	.63

Note: Viton o-ring is standard



Flare to Straight Thread 485F

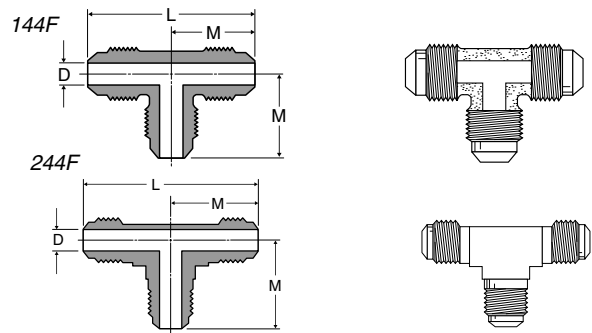
PART NO.	TUBE SIZE	STRAIGHT THREAD	HEX	L	N	FLOW DIA. D
485F-12-8	3/4	3/4-16	1 1/16	1.80	.44	.397
485F-12-12	3/4	1 1/16-12	1 1/4	2.03	.59	.615



Union Tee 144F-244F

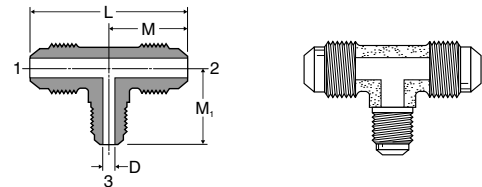
Ref. SAE 010401

PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
144F-3	3/16	3/8-24	1.46	.73	.125
144F-4	1/4	7/16-20	1.72	.86	.189
244F-4	1/4	7/16-20	1.72	.86	.189
144F-5	5/16	1/2-20	1.82	.91	.220
144F-6	3/8	5/8-18	2.08	1.04	.283
144F-8	1/2	3/4-16	2.46	1.23	.408
144F-10	5/8	7/8-14	2.78	1.39	.503



Union Tee 144F-244F combination sizes

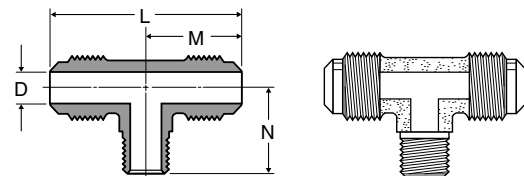
PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L	M	M1	FLOW DIA. D
144F-6-6-4	3/8	3/8	1/4	2.08	1.04	.89	.189
144F-8-8-6	1/2	1/2	3/8	2.40	1.20	1.10	.283



Male Branch Tee 145F

Ref. SAE 010425

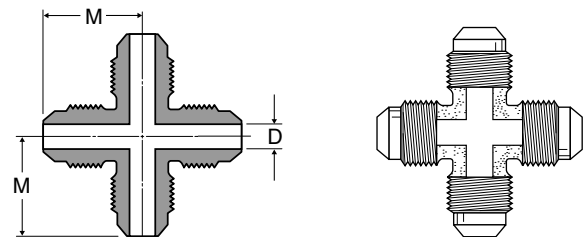
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
145F-2-2	1/8	1/8	5/16-24	1.26	.63	.69	.079
145F-4-2	1/4	1/8	7/16-20	1.58	.79	.76	.189
145F-4-4	1/4	1/4	7/16-20	1.78	.89	.92	.188
145F-5-4	5/16	1/4	1/2-20	1.90	.95	.96	.220
145F-6-4	3/8	1/4	5/8-18	1.96	.98	1.05	.281
145F-6-6	3/8	3/8	5/8-18	2.00	1.00	.98	.283
145F-6-8	3/8	1/2	5/8-18	2.28	1.14	1.26	.281
145F-8-6	1/2	3/8	3/4-16	2.40	1.20	1.10	.408
145F-8-8	1/2	1/2	3/4-16	2.46	1.23	1.36	.408
145F-10-8	5/8	1/2	7/8-14	2.78	1.39	1.36	.501



Cross 147F

Ref. SAE 010501

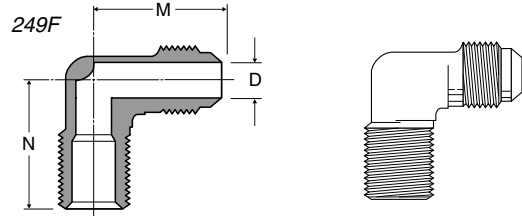
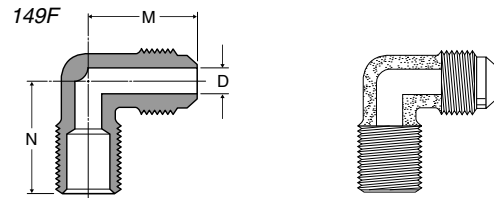
PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
147F-6	3/8	5/8-18	1.04	.283



Male Elbow 149F-249F

Ref. SAE 010202 *Thread Protectors

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
149F-2-2	1/8	1/8	5/16-24	.63	.73	.079
149F-3-2	3/16	1/8	3/8-24	.75	.75	.126
249F-3-2	3/16	1/8	3/8-24	.73	.73	.126
149F-4-2	1/4	1/8	7/16-20	.79	.76	.189
249F-4-2	1/4	1/8	7/16-20	.79	.76	.189
149F-4-4	1/4	1/4	7/16-20	.89	.92	.189
249F-4-4	1/4	1/4	7/16-20	.89	.92	.189
149F-4-6	1/4	3/8	7/16-20	.92	1.01	.189
249F-4-6	1/4	3/8	7/16-20	.92	1.01	.189
149F-5-2	5/16	1/8	1/2-20	.90	.79	.220
249F-5-2	5/16	1/8	1/2-20	.89	.77	.220
149F-5-4	5/16	1/4	1/2-20	.92	.95	.220
249F-5-4	5/16	1/4	1/2-20	.95	.92	.220
149F-5-6	5/16	3/8	1/2-20	.98	1.01	.219
149F-6-2	3/8	1/8	5/8-18	1.01	.90	.220
249F-6-2	3/8	1/8	5/8-18	1.01	.89	.220
149F-6-4	3/8	1/4	5/8-18	1.01	1.05	.283
249F-6-4	3/8	1/4	5/8-18	.98	1.04	.283
149F-6-6	3/8	3/8	5/8-18	1.04	1.07	.281
249F-6-6	3/8	3/8	5/8-18	1.04	1.07	.283
149F-6-8	3/8	1/2	5/8-18	1.15	1.27	.281
249F-6-8	3/8	1/2	5/8-18	1.14	1.26	.283
149F-6-12	3/8	3/4	5/8-18	1.25	1.38	.283
149F-8-4	1/2	1/4	3/4-16	1.20	1.17	.312
149F-8-6	1/2	3/8	3/4-16	1.20	1.09	.408
249F-8-6	1/2	3/8	3/4-16	1.20	1.10	.408
149F-8-8	1/2	1/2	3/4-16	1.28	1.38	.408
249F-8-8	1/2	1/2	3/4-16	1.26	1.36	.408
149F-8-12	1/2	3/4	3/4-16	1.38	1.38	.408
149F-10-6	5/8	3/8	7/8-14	1.41	1.25	.408
149F-10-8	5/8	1/2	7/8-14	1.40	1.39	.502
249F-10-8	5/8	1/2	7/8-14	1.39	1.36	.502
149F-10-12	5/8	3/4	7/8-14	1.42	1.48	.502
149F-12-8*	3/4	1/2	1-1/16-14	1.60	1.48	.564
149F-12-12*	3/4	3/4	1-1/16-14	1.59	1.62	.625
149F-14-12	7/8	3/4	1-1/4-12	1.73	1.67	.751

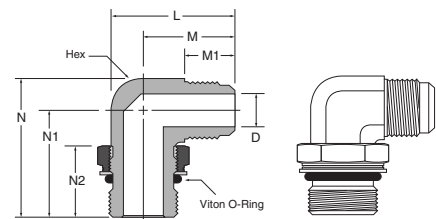


D

Flare Elbow to Metric Adaptor 149F-X-MIX

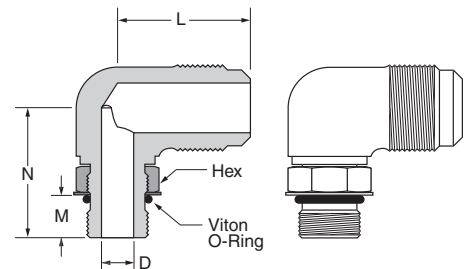
PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	L	M	M1	N	N1	N2	D
149F-10-MI27	5/8	M27 x 2.0	7/8	1.95	1.46	.88	2.12	1.63	1.09	.50

Note: Viton o-ring is standard



Flare Elbow to Straight Thread 1495F

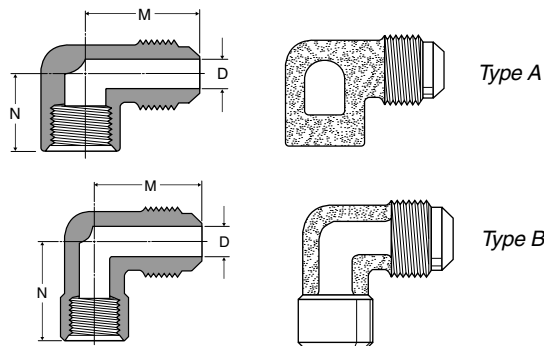
PART NO.	TUBE SIZE	STRAIGHT THREAD	HEX	L	N	M	FLOW DIA. D
1495F-12-8	3/4	3/4-16	7/8	1.60	1.60	.52	.398
1495F-12-12	3/4	3/4-16	1 1/4	1.59	2.12	.71	.616



Female Elbow 150F

Ref. SAE 010203

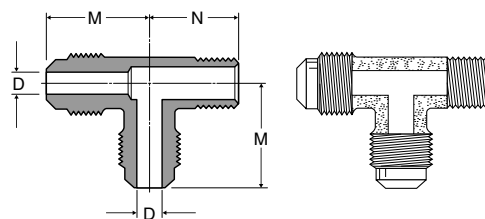
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D	TYPE
150F-4-2	1/4	1/8	7/16-20	.86	.50	.189	A
150F-4-4	1/4	1/4	7/16-20	.95	.64	.189	A
150F-5-4	5/16	1/4	1/2-20	1.01	.64	.220	A
150F-6-2	3/8	1/8	5/8-18	1.08	.48	.283	B
150F-6-4	3/8	1/4	5/8-18	1.07	.67	.283	A
150F-6-6	3/8	3/8	5/8-18	1.14	.67	.283	A
150F-6-8	3/8	1/2	5/8-18	1.23	.86	.283	A
150F-8-6	1/2	3/8	3/4-16	1.25	.69	.408	A
150F-8-8	1/2	1/2	3/4-16	1.36	.94	.408	A
150F-8-12	1/2	3/4	3/4-16	1.41	.94	.408	A
150F-10-8	5/8	1/2	7/8-14	1.48	1.01	.502	A
150F-10-12	5/8	3/4	7/8-14	1.64	.98	.502	A



Male Run Tee 151F

Ref. SAE 010424

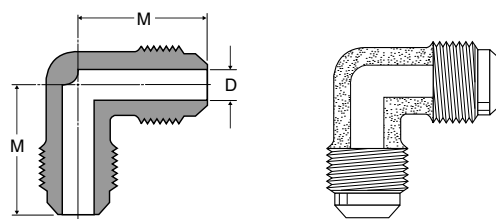
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
151F-4-2	1/4	1/8	7/16-20	.86	.76	.189
151F-4-4	1/4	1/4	7/16-20	.92	.89	.189
151F-5-4	5/16	1/4	1/2-20	.92	.95	.220
151F-6-4	3/8	1/4	5/8-18	1.04	1.04	.283
151F-6-6	3/8	3/8	5/8-18	.98	1.00	.283
151F-6-8	3/8	1/2	5/8-18	1.26	1.16	.283
151F-8-6	1/2	3/8	3/4-16	1.20	1.10	.406
151F-8-8	1/2	1/2	3/4-16	1.35	1.23	.408
151F-10-8	5/8	1/2	7/8-14	1.36	1.39	.500



Union Elbow 155F

Ref. SAE 010201 *Thread Protectors

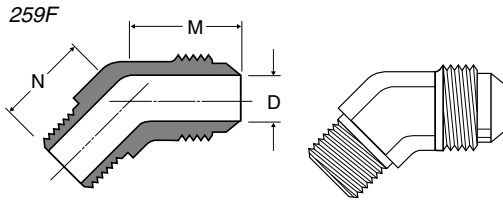
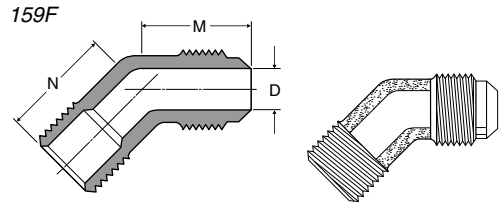
PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
155F-2	1/8	5/16-24	.64	.079
155F-3	3/16	3/8-24	.73	.126
155F-4	1/4	7/16-20	.86	.189
155F-5	5/16	1/2-20	.92	.220
155F-6	3/8	5/8-18	1.04	.283
155F-8	1/2	3/4-16	1.31	.408
155F-10	5/8	7/8-14	1.39	.502
155F-12*	3/4	1-1/16-14	1.63	.625



45° Elbow 159F-259F

Ref. SAE 010302 *Thread Protectors

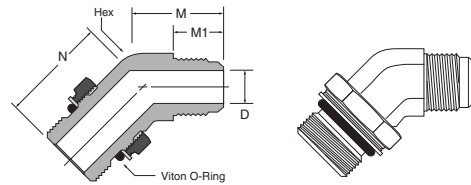
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
159F-4-2	1/4	1/8	7/16-20	.78	.56	.188
259F-4-2	1/4	1/8	7/16-20	.65	.62	.188
159F-4-4	1/4	1/4	7/16-20	.75	.84	.188
259F-4-4	1/4	1/4	7/16-20	.73	.84	.188
159F-5-2	5/16	1/8	1/2-20	.75	.65	.220
159F-5-4	5/16	1/4	1/2-20	.75	.81	.220
159F-6-2	3/8	1/8	5/8-18	.89	.67	.220
159F-6-4	3/8	1/4	5/8-18	.89	.86	.283
259F-6-4	3/8	1/4	5/8-18	.91	.86	.283
159F-6-6	3/8	3/8	5/8-18	.91	.93	.283
259F-6-6	3/8	3/8	5/8-18	.91	.93	.283
159F-8-4	1/2	1/4	3/4-16	1.06	.95	.408
159F-8-6	1/2	3/8	3/4-16	1.06	.95	.408
259F-8-6	1/2	3/8	3/4-16	1.04	.93	.408
159F-8-8	1/2	1/2	3/4-16	1.00	.87	.406
259F-8-8	1/2	1/2	3/4-16	1.10	1.15	.408
159F-10-6	5/8	3/8	7/8-14	1.13	.95	.406
259F-10-6	5/8	3/8	7/8-14	1.20	1.15	.503
159F-10-8	5/8	1/2	7/8-14	1.21	1.16	.503
259F-10-8	5/8	1/2	7/8-14	1.21	.98	.503
159F-12-8*	3/4	1/2	1-1/16-14	1.28	1.16	.560



45° Flare Elbow to Metric Adaptor 159F-X-MIX

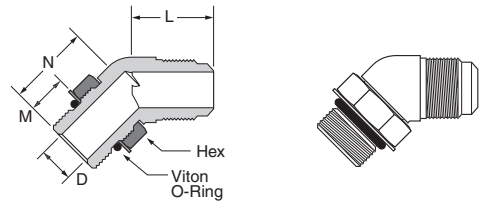
PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	M	M1	N	D
159F-8-M116	1/2	M16 X 1.5	13/16	1.10	.75	1.16	.36
159F-10-M127	5/8	M27 x 2.0	1 1/8	1.21	.88	1.50	.50

Note: Viton o-ring is standard



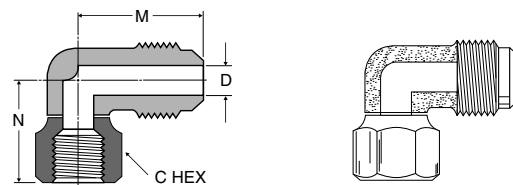
45° Flare to Straight Thread 1595F

PART NO.	TUBE SIZE	STRAIGHT THREAD	HEX	L	N	M	FLOW DIA. D
1595F-8-8	1/2	3/4-16	7/8	1.00	1.16	.59	.400
1595F-12-8	3/4	3/4-16	7/8	1.41	1.30	.52	.398
1595F-12-12	3/4	1 1/16-12	1 1/4	1.41	1.45	.68	.616



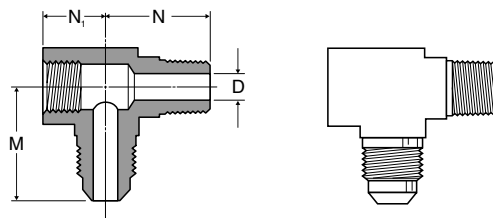
90° Swivel Elbow 166FSV

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	M	N	FLOW DIA. D
166FSV-4-4	1/4	7/16-20	5/8	.86	.93	.189
166FSV-6-6	3/8	5/8-18	13/16	1.04	1.12	.282
166FSV-8-8	1/2	3/4-16	15/16	1.23	1.31	.408
166FSV-10-10	5/8	7/8-14	1-1/16	1.39	1.50	.502
166FSV-12-12	3/4	1-1/16-14	1-5/16	1.60	1.83	.627



Adapter Tee 256F

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	N1	FLOW DIA. D
256F-4-2	1/4	1/8	7/16-20	.86	.76	.47	.188



D

Flared Seal Plug 639F

Ref. SAE 010109

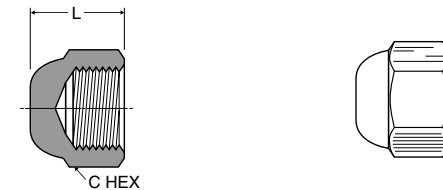
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
639F-4	1/4	7/16-20	7/16	.69
639F-5	5/16	1/2-20	1/2	.78
639F-6	3/8	5/8-18	5/8	.88
639F-8	1/2	3/4-16	3/4	1.06
639F-10	5/8	7/8-14	7/8	1.19



Cap Nut 640F

Ref. SAE 010112

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
640F-3*	3/16	3/8-24	1/2	.47
640F-4*	1/4	7/16-20	9/16	.53
640F-5*	5/16	1/2-20	5/8	.62
640F-6*	3/8	5/8-18	3/4	.69
640F-8*	1/2	3/4-16	7/8	.84
640F-10*	5/8	7/8-14	1-1/16	.97

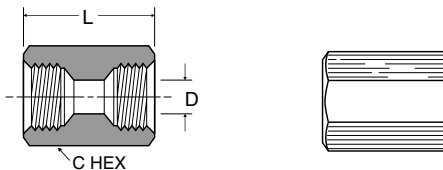


*Should be used with 2GF copper gasket.

Flared Union–Female Flare to Female Flare 660FHD

Ref. SAE 010107

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
660FHD-4*	1/4	7/16-20	5/8	1.03	.250
660FHD-6*	3/8	5/8-18	13/16	1.26	.375
660FHD-8*	1/2	3/4-16	15/16	1.43	.500
660FHD-10*	5/8	7/8-14	1-1/16	1.69	.626

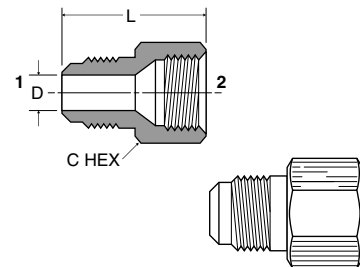


*Should be used with 2GF copper gasket.

Reducer–Male Flare to Female Flare 661FHD

Ref. SAE 010105

PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	FLOW DIA. D
661FHD-4-6*	1/4	3/8	7/16-20	5/8-18	13/16	1.20	.189
661FHD-4-8*	1/4	1/2	7/16-20	3/4-16	15/16	1.36	.189
661FHD-6-4*	3/8	1/4	5/8-18	7/16-20	5/8	1.10	.283
661FHD-6-8*	3/8	1/2	5/8-18	3/4-16	15/16	1.42	.283
661FHD-8-6*	1/2	3/8	3/4-16	5/8-18	13/16	1.39	.377
661FHD-8-10*	1/2	5/8	3/4-16	7/8-14	1-1/16	1.67	.408
661FHD-10-8*	5/8	1/2	7/8-14	3/4-16	15/16	1.60	.502
661FHD-10-12*	5/8	3/4	7/8-14	1-1/16-14	1-5/16	1.95	.502
661FHD-12-10*	3/4	5/8	1-1/16-14	7/8-14	1-1/16	1.86	.626

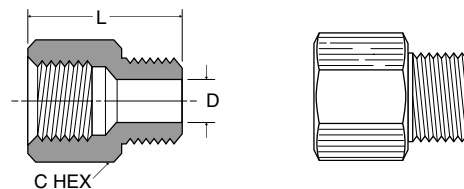


*Should be used with 2GF copper gasket.

Female Flare to Male Pipe Thread 664FHD

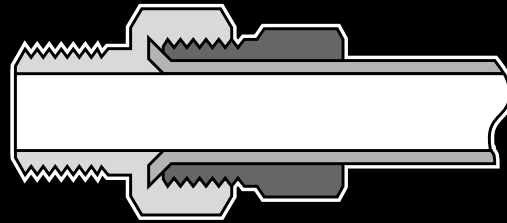
Ref. SAE 010106

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
664FHD-4-2*	1/4	1/8	7/16-20	5/8	.91	.219
664FHD-4-4*	1/4	1/4	7/16-20	5/8	1.01	.250
664FHD-6-4*	3/8	1/4	5/8-18	13/16	1.28	.344
664FHD-8-6*	1/2	3/8	3/4-16	15/16	1.36	.406



*Should be used with 2GF copper flare gasket.





Inverted Flared Fittings

Advantages

Built to resist mechanical pullout. This economical fitting can be assembled and disassembled repeatedly. Readily available in a broad selection of styles to fill your specific needs. Manufactured from CA 360 or CA 345 brass.

Specifications

Listed with Underwriter's Laboratories for flammable liquid and gas. Meets functional requirements of SAE, J512, ASA and MS (Military Standards). Refer to list of UL listed fittings on page M10 for specific configurations.

Applications

Use with copper, brass, aluminum and welded steel hydraulic tubing that can be flared. Manufactured especially for hard-to-hold liquids and gases.

Working Pressure Ranges

Temperature and type of tubing used are important factors. However, the following table is a good guide for proper selection. Temperature 73°F with copper tubing:

PSI	TUBE O.D. (IN.)	TUBE WALL (IN.)
2800	1/8	.030
1900	3/16	.030
1400	1/4	.030
1200	5/16	.032
1000	3/8	.032
750	1/2	.032
650	5/8	.035
550	3/4	.035

Temperature Ranges

From -65° to +250°F.

Vibration

Will withstand minimal vibration movements.

Assembly Instructions

1. Cut tubing squarely and clean tube end thoroughly to remove burrs.
2. Place nut onto tube. Place threaded end of nut toward end of tube.
3. On thin wall copper, welded or brazed tubing, use double flare to prevent pinch-off or cracked flares.
4. Clamp tube flare between nut and flare seat of body by screwing nut on finger-tight. Tighten with a wrench an additional 1/4 turn for a metal-to-metal seal.

Note: The seat dimensions are predicated on practical threading limitations and use of these fittings with double flared tubing.

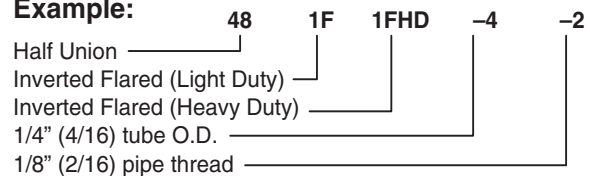
Order

By part number and name. Bodies and nuts are separate items and individual part numbers must be indicated when ordered.

Nomenclature

Part numbers are constructed from symbols that identify the style and size of the fitting. The first series of numbers and letters identifies the style and type fitting. The second series of numbers describes the size.

Example:



Sizes

Tube sizes are determined by the numbers of sixteenths of an inch in the tube O.D.

Special Fittings

Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry. Special UL stamped fittings are available. Please consult price list.

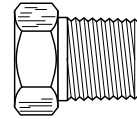
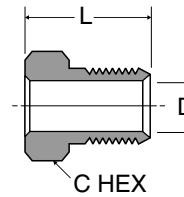
Pricing

Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Nut 411F

Ref. SAE 040110

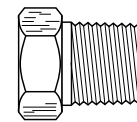
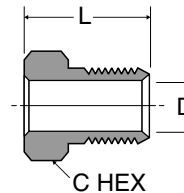
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
411F-2	1/8	5/16-28	5/16	.52	.133
411F-3	3/16	3/8-24	3/8	.56	.197
411F-4	1/4	7/16-24	7/16	.56	.259
411F-5	5/16	1/2-20	1/2	.62	.321
411F-6	3/8	5/8-18	5/8	.66	.384
411F-8	1/2	3/4-18	3/4	.74	.508



Steel Nut-Zinc Chromate 41IFS

Ref. SAE 040110

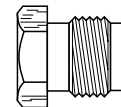
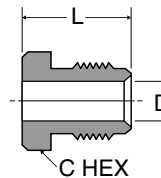
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
41IFS-3	3/16	3/8-24	3/8	.56	.196
41IFS-4	1/4	7/16-24	7/16	.56	.259
41IFS-5	5/16	1/2-20	1/2	.62	.321
41IFS-6	3/8	5/8-18	5/8	.66	.384
41IFS-8	1/2	3/4-18	3/4	.74	.508
41IFS-10	5/8	7/8-18	7/8	.80	.633
41IFS-12	3/4	1-1/16-16	1-1/16	.88	.759
41IFS-14	7/8	1-3/16-16	1-3/16	1.06	.890



Piloted Nut 41IFF for Single Flared Tubing

Ref. SAE 040110

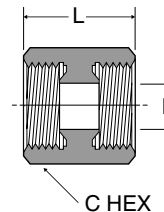
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
41IFF-2	1/8	5/16-28	5/16	.52	.133
41IFF-3	3/16	3/8-24	3/8	.56	.197
41IFF-4	1/4	7/16-24	7/16	.56	.259
41IFF-5	5/16	1/2-20	1/2	.62	.321
41IFF-6	3/8	5/8-18	5/8	.66	.384
41IFF-8	1/2	3/4-18	3/4	.74	.508



Union 42IFHD

Ref. SAE 040101

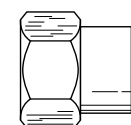
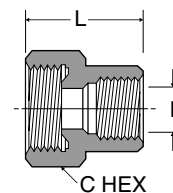
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
42IFHD-2	1/8	5/16-28	13/32	.60	.078
42IFHD-3	3/16	3/8-24	15/32	.65	.125
42IFHD-4	1/4	7/16-24	17/32	.63	.189
42IFHD-5	5/16	1/2-20	19/32	.71	.220
42IFHD-6	3/8	5/8-18	3/4	.81	.283
42IFHD-8	1/2	3/4-18	29/32	.92	.408



Female Connector 46IFHD

Ref. SAE 040103

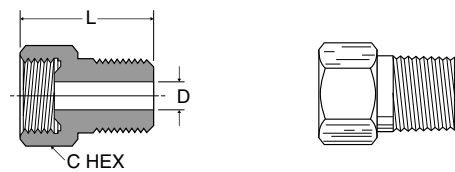
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
46IFHD-3-2	3/16	1/8	3/8-24	1/2	.76	.125
46IFHD-4-2	1/4	1/8	7/16-24	17/32	.76	.189
46IFHD-5-2	5/16	1/8	1/2-20	19/32	.79	.220
46IFHD-6-4	3/8	1/4	5/8-18	3/4	1.04	.283
46IFHD-8-6	1/2	3/8	3/4-18	29/32	1.10	.408



Male Connector 48IFHD

Ref. SAE 040102

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
48IFHD-2-2	1/8	1/8	5/16-28	13/32	.63	.078
48IFHD-3-2	3/16	1/8	3/8-24	15/32	.70	.125
48IFHD-4-2	1/4	1/8	7/16-24	17/32	.74	.188
48IFHD-4-4	1/4	1/4	7/16-24	9/16	.89	.189
48IFHD-5-2	5/16	1/8	1/2-20	19/32	.79	.219
48IFHD-5-4	5/16	1/4	1/2-20	19/32	.98	.220
48IFHD-6-2	3/8	1/8	5/8-18	3/4	.89	.220
48IFHD-6-4	3/8	1/4	5/8-18	3/4	1.03	.283
48IFHD-6-6	3/8	3/8	5/8-18	3/4	1.03	.283
48IFHD-8-4	1/2	1/4	3/4-18	29/32	1.07	.346
48IFHD-8-6	1/2	3/8	3/4-18	29/32	1.07	.408
48IFHD-8-8	1/2	1/2	3/4-18	29/32	1.26	.408
48IFHD-10-8	5/8	1/2	7/8-18	1-1/16	1.32	.533
48IFHD-12-12	3/4	3/4	1-1/16-16	1 1/4	1.38	.625
48IFHD-14-12	7/8	3/4	1-3/16-16	1 5/16	1.30	.750

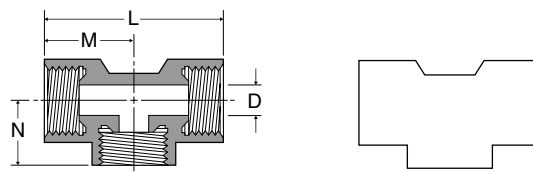


D

Union Tee 244IFHD

Ref. SAE 040401

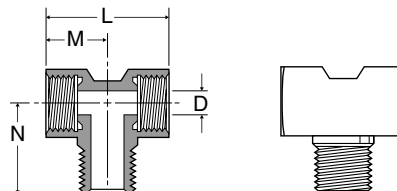
PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	N	FLOW DIA. D
244IFHD-3	3/16	3/8-24	1.10	.55	.39	.125
244IFHD-4	1/4	7/16-24	1.13	.56	.42	.189
244IFHD-5	5/16	1/2-20	1.26	.63	.45	.220
244IFHD-6	3/8	5/8-18	1.48	.74	.56	.283
244IFHD-8	1/2	3/4-18	1.76	.88	.67	.408



Male Branch Tee 245IFHD

Ref. SAE 040425

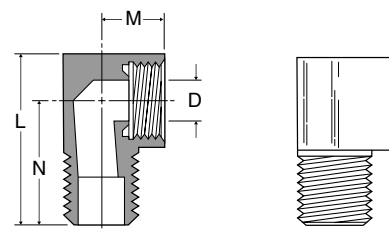
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
245IFHD-4-2	1/4	1/8	7/16-24	.85	.43	.64	.189
245IFHD-6-4	3/8	1/4	5/8-18	1.17	.58	.94	.283



Male Elbow 249IFHD-249IF

Ref. SAE 040202

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
249IFHD-2-2	1/8	1/8	5/16-28	.79	.25	.58	.078
249IFHD-3-2	3/16	1/8	3/8-24	.85	.27	.61	.125
249IFHD-4-2	1/4	1/8	7/16-24	.92	.33	.65	.189
249IFHD-4-4	1/4	1/4	7/16-24	1.10	.27	.83	.189
249IFHD-5-2	5/16	1/8	1/2-20	.98	.47	.68	.219
249IFHD-5-4	5/16	1/4	1/2-20	1.16	.46	.86	.220
249IFHD-6-2	3/8	1/8	5/8-18	1.13	.53	.76	.220
249IF-6-4†	3/8	1/4	5/8-18	1.26	.45	.92	.281
249IFHD-6-4	3/8	1/4	5/8-18	1.32	.53	.95	.283
249IFHD-6-6	3/8	3/8	5/8-18	1.32	.50	.94	.283
249IFHD-8-4	1/2	1/4	3/4-18	1.48	.59	1.02	.408
249IF-8-6+	1/2	3/8	3/4-18	1.42	.53	.99	.406
249IFHD-8-6	1/2	3/8	3/4-18	1.48	.59	1.02	.408
249IFHD-8-8	1/2	1/2	3/4-18	1.67	.66	1.22	.408
249IFHD-10-6	5/8	3/8	7/8-18	1.62	.67	1.09	.533
249IFHD-10-8	5/8	1/2	7/8-18	1.82	.67	1.29	.533
249IFHD-14-12	7/8	3/4	1-3/16-16	2.12	.91	1.44	.750

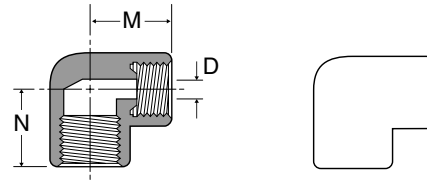


†Light Duty Series

Female Elbow 250IFHD

Ref. SAE 040203

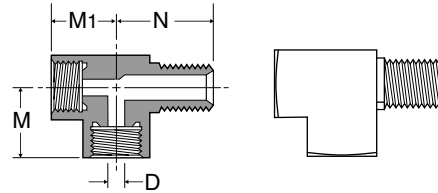
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
250IFHD-3-2	3/16	1/8	3/8-24	.50	.49	.125
250IFHD-4-2	1/4	1/8	7/16-24	.53	.53	.189
250IFHD-5-2	5/16	1/8	1/2-20	.59	.59	.220
250IFHD-6-4	3/8	1/4	5/8-18	.67	.68	.283



Male Run Tee 251IFHD

Ref. SAE 040424

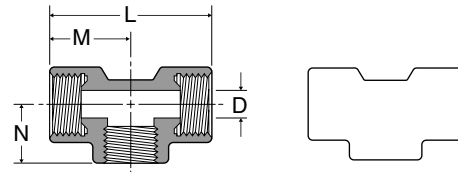
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	M1	N	FLOW DIA. D
251IFHD-3-2	3/16	1/8	3/8-24	.39	.53	.72	.125
251IFHD-5-2	5/16	1/8	1/2-20	.45	.62	.85	.220
251IFHD-6-4	3/8	1/4	5/8-18	.56	.75	1.08	.283



Female Branch Tee 252IFHD

Ref. SAE 040427

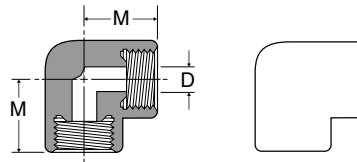
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
252IFHD-5-2	5/16	1/8	1/2-20	1.26	.63	.45	.220
252IFHD-6-4	3/8	1/4	5/8-18	1.48	.74	.56	.283



Union Elbow 255IFHD

Ref. SAE 040201

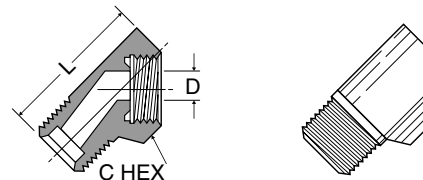
PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
255IFHD-4	1/4	7/16-24	.55	.189

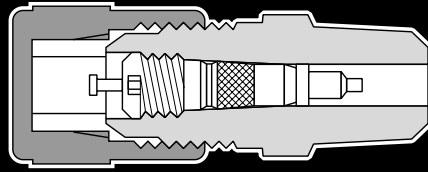


45° Elbow 259IFHD

Ref. SAE 040302

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
259IFHD-3-2	3/16	1/8	3/8-24	17/32	.88	.125
259IFHD-4-2	1/4	1/8	7/16-24	9/16	.94	.187
259IFHD-5-2	5/16	1/8	1/2-20	5/8	1.00	.220
259IFHD-5-4	5/16	1/4	1/2-20	5/8	1.16	.220
259IFHD-6-4	3/8	1/4	5/8-18	25/32	1.34	.283
259IFHD-8-6	1/2	3/8	3/4-18	7/8	1.44	.375
259IFHD-10-8	5/8	1/2	7/8-18	1-1/16	1.75	.533





Access Valves

Advantages

Access Valves are designed to offer convenient low cost access ports for Refrigeration service. All Access Valves feature 1/4" SAE male flare access ports and are furnished with a finger tight quick seal cap. For greater flexibility, all Tees and Crosses are machined to receive an access core in all 1/4" SAE flare ends. This allows for 2 or more access connections in one fitting plus greater flexibility in the positioning of the valves. All Access Valves with pipe connections have internal ODS solder cups so that these valves may be installed in either of 2 ways.

Applications

Access Valves may be installed in any position on either high or low side for quick testing, pressure checking, purging or charging.

Valve Bodies

Straight Access Valve bodies are manufactured from brass rod CA360 or CA345. Shaped Access Valve bodies are manufactured from brass forge rod CA377. All Access Valve bodies are machined in accordance with ARI standard 720.

Valve Core

Parker valve cores meet ARI standard 720 and are designed for use with all fluorocarbon refrigerants such as R-12, R-22 and R-502, R-134a and are resistant to oils, alkalies and dilute mineral acids.

Working Pressure and Temperature Ranges

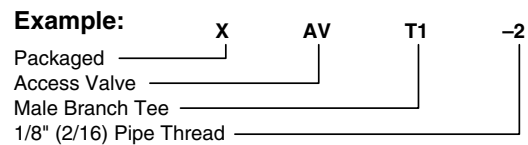
Up to 500 PSI
-20°F to +220°F

Order

By part number and name.

Nomenclature

Part numbers are constructed from symbols that identify the style and size of the valve. The first series of letters identifies the style and type valve. The second series of numbers describes the size.



Sizes

Tube sized are determined by the number of sixteenths of an inch in the tube O.D.

Special Fittings

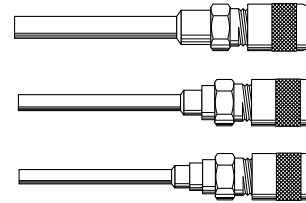
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing

Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

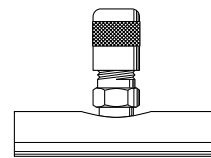
Extended Copper Tube AVUSE

PART NO.	CONNECTION SIZE
AVUSE-2	1/8" O.D. Tube
AVUSE-3	3/16" O.D. Tube
AVUSE-4	1/4" O.D. Tube
AVUSE-5	5/16" O.D. Tube
AVUSE-6	3/8" O.D. Tube
AVUSE-8	1/2" O.D. Tube
AVUSE-9	1/8" O.D. Tube; Additional steps on body for 3/16", 1/4", 5/16", 3/8" O.D. Tube. 3/16", 1/4", or 5/16" Solder Fitting/Swaged Tube.
AVUSE-11	3/16" O.D. Tube; Additional steps on body for 1/4" or 3/8" Solder Fittings/Swaged Tubes 5/16" O.D. Tube.



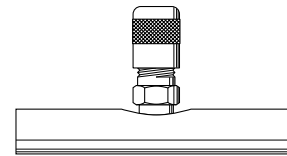
Solder Tee AVTS

PART NO.	CONNECTION SIZE
AVTS-4	1/4" O.D. Tube or 3/8" Solder Fitting/Swaged Tube
AVTS-5	5/16" O.D. Tube or 3/8" Solder Fitting/Swaged Tube
AVTS-6	3/8" O.D. Tube or 1/2" Solder Fitting/Swaged Tube
AVTS-8	1/2" O.D. Tube or 5/8" Solder Fitting/Swaged Tube



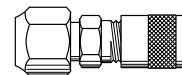
Extended Solder Tee AVTSL

PART NO.	CONNECTION SIZE
AVTSL-4	1/4" O.D. Tube/Solder 3/16", 1/4" & 5/16" Tube
AVTSL-5	5/16" O.D. Tube/Solder 1/4", 5/16" & 3/8" Tube
AVTSL-6	3/8" O.D. Tube/Solder 5/16", 3/8" & 7/16" Tube



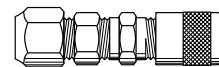
Full Union AVU2

PART NO.	CONNECTION SIZE
AVU2-4	1/4" O.D. Flare Tube With Forged Flare Nut



Bulkhead Union AVU2BH

PART NO.	CONNECTION SIZE
AVU2BH-4	1/4" Bulkhead Access X 1/4" SAE With Forged Nut



Bulkhead Solder Union AVUS3BH

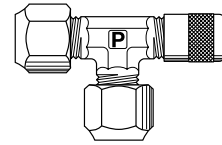
PART NO.	CONNECTION SIZE
AVUS3BH-4	1/4" Bulkhead Access X 3 Way ODS



D

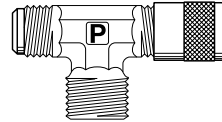
Forged Union Tee AVT2

PART NO.	CONNECTION SIZE
AVT2-4	1/4" Access All Ends With 2 Forged Flare Nuts and One Core and Cap



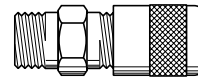
Forged Branch Tee AVT1

PART NO.	CONNECTION SIZE
AVT1-2	1/8" Male Pipe or 1/4" O.D. Solder on Branch x 1/4" Access Both Ends With One Core and Cap
AVT1-4	1/4" Male Pipe or 5/16" O.D. Solder on Branch x 1/4" Access Both Ends With One Core and Cap



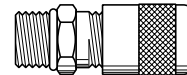
Male Connector AVU1

PART NO.	CONNECTION SIZE
AVU1-2	1/8" Male Pipe or 1/4" O.D. Solder
AVU1-4	1/4" Male Pipe or 5/16" O.D. Solder



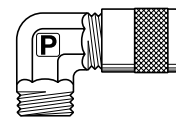
Access Valve Assembly AVUIFI

PART NO.	CONNECTION SIZE
AVUIFI-4	7/16-20 SAE Straight thread O-Ring Port Note: Standard o-ring is neoprene. Consult Brass Products Division for optional o-rings



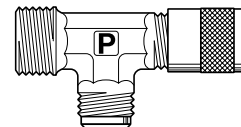
Forged Male Elbow AVE1

PART NO.	CONNECTION SIZE
AVE1-2	1/8" Male Pipe or 1/4" O.D. Solder



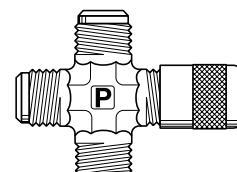
Forged Male Run Tee AVT3

PART NO.	CONNECTION SIZE
AVT3-2	1/8" Male Pipe or 1/4" O.D. Solder on Run x 1/4" Access on Run and Branch With One Core and Cap
AVT3-4	1/4" Male Pipe or 5/16" O.D. Solder on Run x 1/4" Access on Run and Branch With One Core and Cap



Forged Male Cross AVC1

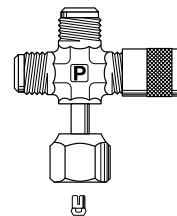
PART NO.	CONNECTION SIZE
AVC1-2	1/8" Male Pipe or 1/4" O.D. Solder x 1/4" Access on all Flare Ends With One Core and Cap
AVC1-4	1/4" Male Pipe or 5/16" O.D. Solder x 1/4" Access on all Flare Ends With One Core and Cap



D

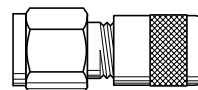
Swivel Cross AVCS4D-4

PART NO.	CONNECTION SIZE
AVCS4D-4	1/4" Forged Female Flare Swivel With Depressor x 1/4" Access on all Flare Ends with One Core and Cap



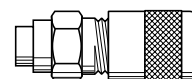
Female Connector AVUR3

PART NO.	CONNECTION SIZE
AVUR3-4	1/4" Female Flare with Copper Gasket



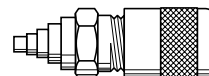
3 Way Solder Connector AVUS3

PART NO.	CONNECTION SIZE
AVUS3-40	For 3/16" O.D. Tube or 1/4" and 3/8" Solder Fitting/Swaged Tube



9 Way Solder Connector AVUS3

PART NO.	CONNECTION SIZE
AVUS3-49	For 3/16", 1/4", 5/16", 3/8" or 1/2" O.D. Tube. Also Fits 3/16", 1/4" and 5/16" Solder Fitting/Swaged Tube or 1/8" Hole May Be Punched in Larger Size Tube



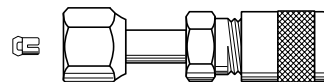
Straight Solder Connector AVUS

PART NO.	CONNECTION SIZE
AVUS-42	1/8" O.D. Tube or 1/4" Solder Fitting/Swaged Tube
AVUS-43	3/16" O.D. Tube or 1/4" Solder Fitting/Swaged Tube
AVUS-44	1/4" O.D. Tube or 3/8" Solder Fitting/Swaged Tube
AVUS-45	5/16" O.D. Tube or 1/2" Solder Fitting/Swaged Tube
AVUS-46	3/8" O.D. Tube or 1/2" Solder Fitting/Swaged Tube



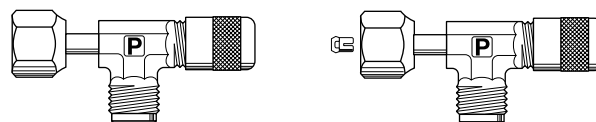
Swivel Connector AVUS4D

PART NO.	CONNECTION SIZE
AVUS4D-4	1/4" Forged Female Flare Swivel Nut with Depressor



Forged Female Run Swivel Tee AVTS4

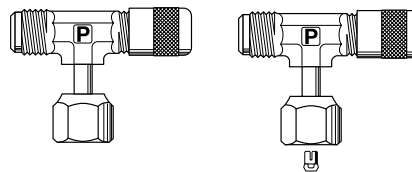
PART NO.	CONNECTION SIZE
AVTS4-4	1/4" Female Flare Swivel x 1/4" Access on Both Run and Branch
AVTS4D-4	1/4" Female Flare Swivel on Run with Depressor x 1/4" Access on Both Run and Branch



D

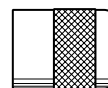
Forged Female Branch Tee AVTS6

PART NO.	CONNECTION SIZE
AVTS6-4	1/4" Female Flare Swivel x 1/4" Access on Both Ends
AVTS6D-4	1/4" Female Flare Swivel on Branch with Depressor x 1/4" Access on Both Ends



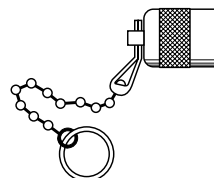
Quick Seal Caps 640QSF

PART NO.	CONNECTION SIZE
640QSF-4	1/4" SAE Seal Cap with Seal Gasket
640QSF-6	3/8" SAE Seal Cap with Seal Gasket



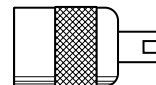
Quick Seal Caps 640QSFC

PART NO.	CONNECTION SIZE
640QSFC-4	1/4" SAE Seal Cap with Chain and Ring Assembly Seal Gasket



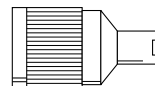
Quick Seal Cap with Core Remover 640QSFCR

PART NO.	CONNECTION SIZE
640QSFCR-4	1/4" SAE Seal Cap Core Remover with internal Seal Gasket



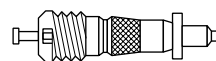
Core Remover CR

PART NO.	CONNECTION SIZE
CR-001	Standard Core Remover



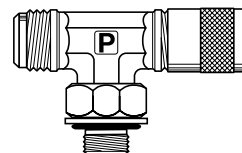
Valve Cores VC

PART NO.	CONNECTION SIZE
VC-001	Replacement Valve Cores For all 1/4" Access Valves



Forged Male Straight Thread O-Ring Port Male Branch Tee AVT1F1

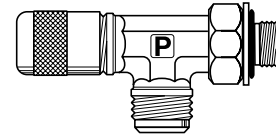
PART NO.	CONNECTION SIZE
AVT1F1-4	1/4" forged male straight thread o-ring port male branch tee



D

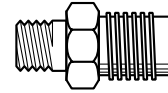
Forged Male Straight Thread O-Ring Port Male Run Tee AVT3F1

PART NO.	CONNECTION SIZE
AVT3FI-4	1/4" forged male straight thread o-ring port male run tee



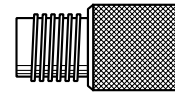
Refrigerant adapter 88AC

PART NO.	CONNECTION SIZE
88AC-8-2	1/8" male pipe to SAE J2197 Acme threaded male connector



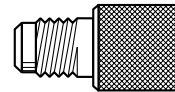
Refrigerant adapter 880AC

PART NO.	CONNECTION SIZE
880AC-8-4	1/4" female SAE flare to SAE J2197 Acme threaded male connector



Refrigerant adapter 881AC

PART NO.	CONNECTION SIZE
881AC-8-4	1/4" SAE male flare to SAE J2197 Acme threaded female connector



D

